

ITAG: Documentation of Credential and Alignment for Uncrewed Aircraft Systems

Credential Name:	Uncrewed Aircraft Systems
Credential Type:	<input checked="" type="checkbox"/> Certification <input type="checkbox"/> License
Issuer of Credential:	Unmanned Safety Institute (USI)
Frequency of Updates:	
Exam(s) Required:	sUAS Safety Certification Level 1 - https://www.unmannedsafetyinstitute.org/small-uas-safety-certification
Additional Requirements:	
Current CTAG/TAG: (if applicable)	Being developed
Description of content to be evaluated and aligned: The certification exam evaluates 11 major themes derived from lessons-learned in traditional aviation and requirements for Remote Pilots.	
How long after attainment can credit be awarded?	2 years
How can receiving institutions verify credential attainment?	Proof of passing sUAS Safety Certification Level 1 certificate

Course Name: Uncrewed Aircraft Systems or equivalent

Credit Hours: 3 semester hours

Course Description:

Postsecondary Learning Outcomes	Content from Credential
1. Demonstrate a basic understanding of weather theory, hazardous weather situations, wind shear avoidance, and the procurement and use of graphical and textual weather products in order to identify current conditions and short-term forecasts.	Unit 3. The Elements. Examines the environment in which UAS and remote pilots operate.
2. Demonstrate basic knowledge of the Federal Aviation Regulations that relate to Remote Pilot in command privileges, limitations, and flight operations.	Unit 4. FAA Regulations. Explores the limitations and authorities vested in remote pilots by 14 CFR 107. Unit 5. Operations in the National Airspace System. Explains the FAA established rules and policies for operating in the National Airspace System.
3. Demonstrate the ability to interpret aeronautical charts in order to identify airspace classification, airport locations, obstructions, and other hazards that may affect a UAS flight	Unit 5. Operations in the National Airspace System. Explains the FAA established rules and policies for operating in the National Airspace System. Unit 7. Aeronautical Decision Making. Explores the process of assessing risks and examines the decision-making process once the operator has a clear picture of the risk.

<p>4. Identify the need for permission to fly in certain types of airspace and be able to utilize the appropriate systems to obtain those permissions</p>	<p>Unit 4. FAA Regulations. Explores the limitations and authorities vested in remote pilots by 14 CFR 107.</p> <p>Unit 5. Operations in the National Airspace System. Explains the FAA established rules and policies for operating in the National Airspace System.</p>
<p>5. Recognize when a waiver is needed for a flight, and understand the process to seek a waiver from the FAA</p>	<p>Unit 5. Operations in the National Airspace System. Explains the FAA established rules and policies for operating in the National Airspace System.</p> <p>Unit 8. Professional Remote Pilot. Examines the ethical and legal requirements of the Remote Pilot in Command (RPIC). Establishes standards of practice as well as explores careers in unmanned aviation.</p>
<p>6. Demonstrate an understanding of the aerodynamics that allow a UAS to fly, and how the shape and size of a UAS can change aerodynamic elements; identify sensor types and capabilities</p>	<p>Unit 2. Unmanned Aircraft. Examines the sub-components of Unmanned Aircraft (UA) and the factors affecting UAS aerodynamics and performance, and exploratory review of robotic aircraft.</p> <p>Unit 9. Datalinks: Electromagnetic Spectrum, signal propagation, influences on UAS communication. Examines the datalinks required to communicate back and forth from the air vehicle to the ground control station and vice versa.</p> <p>Unit 10. UAS Control: Control Station Dynamics, Autonomy vs Direct Control, Simulation. Examines advancements in ground station development and the advantages and disadvantages of this modified and simulated cockpit.</p>
<p>7. Demonstrate a basic knowledge of the performance limitations of UASs, and how to properly plan and conduct a flight within those limitations (weight and balance)</p>	<p>Unit 2. Unmanned Aircraft. Examines the sub-components of Unmanned Aircraft (UA) and the factors affecting UAS aerodynamics and performance, and exploratory review of robotic aircraft.</p> <p>11. Payloads: Data Acquisition, Sensors, Economic Impacts. Examines the sensors and science behind the acquisition of environmental information from a sUAS flying overhead.</p>
<p>8. Identify when crew resource management (CRM) and single pilot resource management</p>	<p>Unit 6. The Human Factors of UAS and Crew Resource Management.</p>

(SRM) is essential to a flight, and describe the elements of effective CRM and SRM, including proper radios phraseology.	<p>Defines human limitations as they contribute to errors and violations that can be the causal factors in UAS accidents. Crew Resource Management (CRM) introduces non- technical skills used to combat human errors.</p> <p>Unit 8. Professional Remote Pilot. Examines the ethical and legal requirements of the Remote Pilot in Command (RPIC). Establishes standards of practice as well as explores careers in unmanned aviation.</p>
9. Describe how safe, effective decisions pertain to a UAS flight, and how hazardous attitudes can degrade safety; ADM, PAVE, IM SAFE	<p>Unit 7. Aeronautical Decision Making. Explores the process of assessing risks and examines the decision-making process once the operator has a clear picture of the risk.</p> <p>Unit 8. Professional Remote Pilot. Examines the ethical and legal requirements of the Remote Pilot in Command (RPIC). Establishes standards of practice as well as explores careers in unmanned aviation.</p>
10. Demonstrate an understanding of the UAS industry and how their inclusion across multiple industries can lead to career opportunities	<p>Unit 1. UAS Foundations. Examines the terms of reference, issues facing UAS integration, and developmental and regulatory history.</p> <p>Unit 8. Professional Remote Pilot. Examines the ethical and legal requirements of the Remote Pilot in Command (RPIC). Establishes standards of practice as well as explores careers in unmanned aviation.</p>
11. Describe the ability to effectively pilot a UAS, and the process involved to initiate, conduct and terminate the flight safely	<p>Unit 4. FAA Regulations. Explores the limitations and authorities vested in remote pilots by 14 CFR 107.</p> <p>Unit 5. Operations in the National Airspace System. Explains the FAA established rules and policies for operating in the National Airspace System.</p> <p>Unit 7. Aeronautical Decision Making. Explores the process of assessing risks and examines the decision-making process once the operator has a clear picture of the risk.</p>
12. Describe a basic understanding of preflight inspection, maintenance, and troubleshooting	<p>Unit 8. Professional Remote Pilot. Examines the ethical and legal requirements of the Remote Pilot in Command (RPIC). Establishes</p>

standards of practice as well as explores careers in unmanned aviation.

Unit 7. Aeronautical Decision Making.
Explores the process of assessing risks and examines the decision-making process once the operator has a clear picture of the risk.